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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/015,429	12/13/2001	Nobuyuki Yamashita	HITACHI-0020	7539

7590 06/04/2004

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EXAMINER
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HWANG, JOON H

ART UNIT	PAPER NUMBER
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2172

DATE MAILED: 06/04/2004

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Please find below and/or attached an Office communication concerning this application or proceeding.

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## Office Action Summary

Application No.

10/015,429

Applicant(s)

YAMASHITA, NOBUYUKI

Examiner

Joon H. Hwang

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 13 December 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-30 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,3-11,13-21 and 23-30 is/are rejected.
- 7) ☒ Claim(s) 2,12 and 22 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☒ Certified copies of the priority documents have been received in Application No. 09/994,950.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☒ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: \_\_\_\_\_

**DETAILED ACTION**

1. The claims 1-30 are pending.

***Claim Rejections - 35 USC § 103***

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1 and 3-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ohata et al. (U. S. Patent No. 5,864,857) in view of Dekimpe et al. (U.S. Patent No. 6,542,895).

With respect to claim 1, Ohata discloses storing and retrieving multidimensional data (abstract). Ohata discloses inputting a definition of a data model of multidimensional data, which includes a definition of a data structure of the data model and a definition of data of the data model (lines 1-31 in col. 6 and figs. 4-6). Ohata discloses storing hierarchy (layer) rule definition data, hierarchy structure definition data, database data, input data, hierarchy structure information, and hierarchy rule (figs. 4-7, lines 1-31 in col. 6, and lines 41-53 in col. 8) concerning a data storage unit. Ohata discloses managing the hierarchy rule based upon the hierarchy rule definition data and managing the hierarchy structure information based upon the hierarchy structure definition data (figs. 4-7, line 1 in col. 6 thru line 53 in col. 8) concerning a layer rule management unit and a layer structure information management unit. Ohata discloses

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inputting the input data in the database data (lines 22-40 in col. 5 and figs. 4-7) concerning a multidimensional database management. Ohata does not explicitly disclose a layer structure information update unit for registering the layer information at the layer structure information. However, DeKimpe discloses restructuring a multidimensional model when adding or removing dimensions and/or dimension members (the layer information at the layer structure information, abstract and lines 11-32 in col. 15), which teaches a created multidimensional model can be updated in relation to the hierarchy(layer) information at the hierarchy(layer) structure information for improving data analysis. Therefore, based on Ohata in view of DeKimpe, it would have been obvious to one having ordinary skill in the art at the time the invention was made to utilize the teachings of DeKimpe to the system of Ohata for registering the hierarchy information at the layer structure information to a structure of created data model for improving data analysis.

With respect to claim 3, Ohata teaches rules expressed in formal expression (figs. 4-5).

With respect to claim 6, Ohata teaches the predetermined rule including a name of a database and description of a predetermined format, the database containing the predetermined rules for generating the corresponding hierarchy information (figs. 4-6 and lines 1-31 in col. 6).

With respect to claim 7, Ohata teaches accessing the database to obtain the predetermined rules (figs. 2 and 4-6 and lines 1-31 in col. 6).

The limitations of claims 4-5 are rejected in the analysis of claims 6-7 above, and these claims are rejected on that basis.

With respect to claim 8, Ohata discloses processing preparation, storing and retrieval of definition information of multidimensional data in response to a request from a user (lines 21-40 in col. 5). Ohata discloses preparing the data model in order to process the request, wherein there is a plurality of data models and the request comprises searching, storing, inputting and retrieving data (lines 55-60 in col. 16, and figs. 14, 17 and 18). This teaches in the absence of the data model, the data model is generated in order to process the request from the user. Furthermore, Ohata discloses determining whether a page is registered for dimension members and registering the page in the absence of such page for dimension members (fig. 1, fig. 16, abstract, and line 47 in col. 9 thru line 5 in col. 13). Similar to the determining step for page above, such step can be utilized for the data model in order to avoid unnecessary duplicated generation process for the data model by ascertaining its existence.

With respect to claim 9, Ohata discloses generating the hierarchy information according to a sequential application of the main hierarchy rule and the plurality of the sub-hierarchy rules (figs. 4-5). Ohata does not explicitly disclose determining whether or not the hierarchy information is successfully generated, the status of process. However, DeKimpe discloses an indication of whether a request process is failed or not (fig. 8). Therefore, based on Ohata in view of DeKimpe, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the

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system of Ohata with the teachings of DeKimpe for the indication of the process status in order to provide a status of a result or outcome of the process.

With respect to claim 10, the limitations of claim 10 are rejected in the analysis of claim 8, and the claim is rejected on that basis.

4. Claims 11 and 13-20 are essentially the same as claims 1 and 3-10 except that it sets forth the claimed invention as a method rather than a system and rejected for the same reasons as applied hereinabove.

5. Claims 21 and 23-30 are essentially the same as claims 1 and 3-10 except that it sets forth the claimed invention as a computer program rather than a system and rejected for the same reasons as applied hereinabove.

***Allowable Subject Matter***

6. Claims 2, 12, and 22 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Claims 2, 12, and 22 identify the distinct feature, the layer rule includes rules for character-row converting a name of the member and for generating the layer information. The closest prior art, Ohata et al. (U. S. Patent No. 5,864,857) disclosing storing and retrieving multidimensional data, fails to suggest the claimed limitation as mentioned above in combination with other claimed elements.

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.


Weissman et al. (U.S. Patent No. 6,212,524), Petculescu et al. (U.S. Patent No. 6,473,764), Reddy et al. (U.S. Patent No. 6,658,413), and Lore et al. (U.S. Patent No. 6,163,774) disclose adding a dimension member.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Joon H. Hwang whose telephone number is 703-305-6469. The examiner can normally be reached on 9:30-6:00(M~F).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, JOHN E BREENE can be reached on 703-305-9790. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Joon Hwang  
5/27/04



JEAN M. CORRIELUS  
PRIMARY EXAMINER